



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 435

[EPA-HQ-OW-2016-0598; FRL-9995-74-OW]

Decision on Supplemental Information on the Effluent Limitations Guidelines and Standards for the Oil and Gas Extraction Point Source Category.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notification of decision.

SUMMARY: The Environmental Protection Agency (EPA) is providing notice of its decision to not revise the final rule establishing pretreatment standards for discharges of pollutants into publicly owned treatment works (POTWs) from onshore unconventional oil and gas (UOG) extraction facilities. In 2016, the EPA promulgated the final rule, Effluent Limitations Guidelines and Standards for the Oil and Gas Extraction Point Source Category (the unconventional oil and gas or UOG rule), based on record information indicating that all facilities subject to the rule were meeting the zero discharge of pollutants requirement in the rule. After promulgation, the EPA received information indicating that certain facilities subject to the final rule were not meeting the rule's zero discharge of pollutants requirement. This notice provides new data and information, the EPA's analyses of that data and announces the Agency's decision to not revise the final UOG rule in response to the remand in *Pennsylvania Grade Crude Oil Coalition v. EPA*, No. 16-4064 (3rd Cir., August 31, 2017), requiring the EPA to consider further information and take any appropriate action with regard to the final rule.

DATES: This decision shall be considered issued for purposes of judicial review at 1 p.m. Eastern Standard Time on July 19, 2019. Section 509(b)(1) of the CWA, judicial review of this decision can be had only by filing a petition for review in the U.S. Court of Appeals within 120 days after the decision is considered issued for purposes of judicial review.

FOR FURTHER INFORMATION CONTACT: For more information, see the EPA's website: <https://www.epa.gov/eg/unconventional-oil-and-gas-extraction-effluent-guidelines>. For technical information, contact Karen Feret, Engineering and Analysis Division (4303T), Office of Water, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone: 202-566-1915; e-mail: feret.karen@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does This Notice Apply to Me?

Entities potentially affected by this action include:

Category	Example of Regulated Entity	North American Industry Classification System (NAICS) Code
Industry	Crude Petroleum and Natural Gas Extraction	211111
Industry	Natural Gas Liquid Extraction	211112

B. Obtaining Copies of This Document and Related Information

The EPA has established a docket for this action under Docket ID No. **EPA-HQ-OW-2016-0598**. All documents in the docket are listed on the <https://www.regulations.gov> web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <https://www.regulations.gov>.

II. Why is EPA Issuing This Decision?

The EPA promulgated the UOG rule on June 28, 2016. 81 FR 41845. The UOG rule regulates wastewater pollutants from unconventional oil and gas extraction activities under Subpart C (Onshore Subcategory) of the oil and gas extraction effluent guidelines. The UOG rule is a national rule that prohibits onshore unconventional oil and gas extraction operations from discharging pollutants in

wastewater to publicly owned treatment works (POTWs), in other words, a “zero discharge” requirement. The UOG rule defines the term “unconventional oil and gas operations” to include operations involving “crude oil and natural gas produced by a well drilled into a shale and/or tight formation (including, but not limited to, shale gas, shale oil, tight gas, and tight oil).” See 40 CFR 435.33(a)(2)(i). In promulgating the rule, the EPA explained that UOG wastewaters are not typical of POTW influent wastewater, and as a result some UOG extraction wastewater pollutants: can be discharged untreated from a POTW to the receiving stream (i.e., the POTW is not designed to treat the pollutant); can cause the disruption of the POTW treatment operations (e.g., biological treatment is inhibited); can accumulate in biosolids, limiting their use; and can cause the formation of harmful disinfection by-products.

The EPA’s record at the time of promulgation indicated that all UOG extraction facilities were meeting the zero discharge requirement, and the EPA received no comments at proposal indicating otherwise. However, after the UOG rule was promulgated, several interested parties notified the EPA that a number of oil and gas operations in Pennsylvania covered by the rule were in fact discharging wastewater to POTWs. These parties stated that their operations are “conventional” under Pennsylvania definitions, although they appear to meet the definition of “unconventional” in the UOG rule.

Based on this post-promulgation information, the EPA extended the compliance date for existing sources that were lawfully discharging to POTWs on or between April 7, 2015, and June 28, 2016, to three years from the effective date of the rule—to August 29, 2019, (compliance date postponement rule). See 81 FR 88126-88127. That rule did not change the compliance date for all other facilities subject to the final UOG rule.

Pennsylvania Grade Crude Oil Coalition (PGCC) also filed a petition for review of the rule in the U.S. Court of Appeals for the Third Circuit. PGCC indicated that the EPA incorrectly found that there were

no existing discharges to POTWs by facilities that meet the definition of “unconventional” in the UOG rule. In response, the EPA filed a motion (unopposed by PGCC) for voluntary remand without vacatur which was granted by the Court in October, 2017. *Pennsylvania Crude Oil Coalition v. EPA*, No. 16-4064 (3rd Cir., Aug. 31, 2017). In the motion, the EPA discussed the post-promulgation information referenced above, acknowledging that this new information was inconsistent with the record for the rule. The EPA explained that the Agency requested the remand to consider any additional evidence relevant to the UOG rule, develop the record, and take any follow-up action as appropriate. This notice provides the EPA’s decision in accordance with this remand.

As explained in this notice, the EPA recently gathered new data and information and performed supporting analyses to update the 2016 record for the final UOG rule. The scope of the data collection and analyses discussed in this notice pertains only to those oil and gas extraction facilities in the United States that the EPA has identified to be discharging UOG wastewater to POTWs at the time it finalized the UOG rule - in other words, those facilities defined as conventional by Pennsylvania that meet the definition of unconventional in the UOG rule and are thus likely subject to the EPA’s 2016 UOG pretreatment standard rule.

EPA staff also met with producers in Pennsylvania to further understand their concerns. As a result of this interaction, the EPA learned that the scope of the Agency’s 2016 UOG pretreatment standard rule may not have been clear to certain producers. To clarify the scope of the UOG rule, the UOG rule is not applicable to activities regulated under the Stripper Subcategory (40 CFR 435 Subpart F). The UOG rule applies to onshore unconventional oil and gas extraction facilities regulated under Subpart C. Subpart C excludes facilities regulated under Subpart F.

III. Summary of Analysis and Results

A detailed description of the data sources, methodology, and associated analyses can be found at: <https://www.epa.gov/eg/unconventional-oil-and-gas-extraction-effluent-guidelines>. This section summarizes that information and provides results.

First, the EPA conducted additional analyses to determine whether wells discharging to POTWs in Pennsylvania would meet the definition of “unconventional” and thus be subject to the EPA’s 2016 UOG rule. Oil and gas operators in the Commonwealth of Pennsylvania must report to the Pennsylvania Department of Environmental Protection information on their wells, such as wastewater management and formation type. During development of the 2016 UOG rule, the EPA used this Commonwealth-compiled data to support the Agency’s finding that there were no UOG extraction facilities discharging wastewater to POTWs. However, based on the information submitted to the EPA after promulgation of the rule, the Agency came to understand that some facilities that would meet the definition of unconventional in the 2016 UOG rule were categorized as conventional in the Pennsylvania data that the EPA relied on, based on the Commonwealth’s narrower definition of unconventional. Accordingly, the EPA has re-evaluated the available data. In particular, the EPA used information that the oil and gas extraction facilities reported to Pennsylvania for 2016 and well formation information from multiple sources to identify those oil and gas extraction facilities that discharged any wastewater to POTWs and that are defined as conventional under Pennsylvania’s definition, but are defined as unconventional under the UOG rule’s definition.¹ As described above, oil and gas extraction activities regulated under the Stripper Subcategory (Subpart F) are not included in this rule, and therefore were not included in the scope of analyses discussed in this notice. In the analysis of the data, the EPA excluded any well that had less than a ratio of 15,000 cubic feet of gas per 1 barrel of oil and had less than an average of 10

¹ The EPA defines unconventional as: 40 CFR 435.33(a)(2)(i) *Unconventional oil and gas* means crude oil and natural gas produced by a well drilled into a shale and/or tight formation (including, but not limited to, shale gas, shale oil, tight gas, tight oil). Pennsylvania defines an unconventional formation as: *A geological shale formation existing below the base of the Elk Sandstone or its geologic equivalent stratigraphic interval where natural gas generally cannot be produced at economic flow rates or in economic volumes except by vertical or horizontal well bores stimulated by hydraulic fracture treatments or by using multilateral well bores or other techniques to expose more of the formation to the well bore (See DCN SGE01486).*

barrels per day of oil over the year's reported production and number of producing days. Based on the 2016 Commonwealth data, the EPA determined that out of 879 oil and gas extraction entities reporting to Pennsylvania in 2016 (and over 6,000 entities nationwide), 22 entities discharged at least some portion of their wastewater to a POTW from UOG operations as defined by the 2016 UOG rule. Based on the 2016 data, the EPA concludes that this subset of entities may need to make changes to comply with the 2016 UOG rule (and would incur any associated costs).

For each well that generated wastewater that was sent to a POTW from these 22 entities, the EPA determined the nearest wastewater management alternative (centralized waste treatment (CWT) facility or Class II underground injection control (UIC) well). The EPA found that wastewater management alternatives were available to all of these entities as many of them reported using another wastewater management alternative in addition to a POTW in 2016. To estimate the potential incremental costs of this rule to these entities (which represent the only entities in the U.S. that may incur costs associated with the nationally applicable rule), the EPA calculated any incremental wastewater management costs for these entities to send their wastewater to the nearest wastewater management alternative as well as any associated incremental transportation costs. The EPA added incremental wastewater management and transportation costs to determine the total incremental costs to these entities to comply with the 2016 UOG rule.

The EPA also evaluated incremental non-water quality environmental impacts associated with alternative wastewater management approaches. These include changes in air emissions, solid waste generation, and energy consumption. The incremental change depends on the alternative wastewater management approach. For example, sludge generation would likely decrease if a UOG facility sends its wastewater to a UIC well and would likely increase if it sends its wastewater to a CWT facility. Even if each UOG operator that currently sends its wastewater to a POTW elected to use a wastewater

management approach that incrementally increased air emissions, sludge generation or energy usage, these changes would be small relative to U.S. totals for this industry as a whole.

The EPA then conducted a discounted cash flow analysis (modeled future revenue and operation costs) over 10 years to estimate the potential financial impacts on these entities. Based on this analysis, the EPA determined that seven of the 22 entities would have negative profits irrespective of the UOG rule's incremental costs. For the remaining entities, when adding in the incremental costs of the rule, the EPA's analysis shows that none of the 15 entities would be at risk of closure as a result of complying with the UOG rule.

In light of the model predictions based on 2016 reported data that some of these entities would have negative profits irrespective of the UOG rule's incremental costs, the EPA also reviewed oil and gas production data for all 22 entities as reported to Pennsylvania in 2017. All 22 entities continued to report oil and gas production to Pennsylvania, demonstrating that they remain in business. Therefore, the EPA is reporting cost information as a range with the lower value representing information for the 15 modeled profitable entities and the upper value representing information for all 22 entities. The EPA's analysis shows that for 2016, the median incremental costs would be \$131 to \$279 per entity and the total costs of the UOG rule for 2016 would be approximately \$33,000 to \$65,000 (in 2016\$).

IV. Findings

At the time the EPA promulgated the 2016 UOG rule, it established a zero discharge of pollutant pretreatment standard for UOG extraction facilities based on alternative wastewater management approaches. Consistent with the factors identified in the Clean Water Act and described in the preamble to the 2016 rule, the EPA found these alternatives to be available, have acceptable non-water quality environmental impacts, and be economically achievable, based in part on its findings that no existing UOG facilities were discharging pollutants to POTWs at the time of the 2016 rule. The EPA concluded

that such standards would prevent some UOG extraction wastewater constituents from largely “passing through” the POTW untreated, and then discharged from the POTW to the receiving stream.

The EPA has supplemented that rulemaking record to account for the UOG facilities in Pennsylvania that were in fact discharging wastewater to POTWs at the time of the rulemaking. Based on the EPA’s analysis of the new information described above, the EPA concludes that the zero discharge of pollutants standard is technologically available, economically achievable, and has acceptable non-water quality environmental impacts. Based on this information, the EPA will not revise the 2016 UOG rule.

Dated: June 20, 2019.

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Assistant Administrator, Office of Water.
[FR Doc. 2019-14361 Filed: 7/3/2019 8:45 am; Publication Date: 7/5/2019]